

(C) FILE CAPLUS  
AN - 1971:89220 CAPLUS

XP-002240238

good

11

DN - 74:89220  
TI - Concentrated sulfuric anhydride  
IN - Amelin, A. G.; Baranova, A. I.; Antonova, N. M.  
PA - Samoilov, Ya. V., Scientific-Research Institute of Fertilizers and  
Insectofungicides  
SO - U.S.S.R.  
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1970, 47(3):  
222.  
CODEN: URXXAF  
DT - Patent  
LA - Russian  
IC - C01B  
CC - 49 (Industrial Inorganic Chemicals)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PN	SU226567		19701029 SU		19651117	
AB	Concd. SO <sub>3</sub> was produced from gaseous mixts. To obtain easily transp- dry solid product, the gaseous mixt. was adso rbed on silica gel at 50-120.degree., with subsequent desorption at 150-300.degree..					
ST	sulfuric anhydride; anhydride sulfuric					
IT	7446-11-9P, preparation RL: PREP (Preparation) ( adsorption - desorption process for, for dry transportable f					

<b>Union of Soviet Socialist Republics</b>	<b>INVENTION SPECIFICATION Pertaining to a Certificate of Authorship</b>	<b>226567</b>
<b>State Committee of the USSR on Matters of Inventions and Discoveries</b>	Dependent on Certificate of Authorship No. –  Filed November 17, 1965 (No. 1038138-23-26)  with Appended Application No. –  Priority –  Announced October 29, 1970 Bulletin No. 33  Specification published January 6, 1971	Class 12i, 17/70  MPC C 01b  UDC 661.257 (088.8)
Inventors	<b>A. G. Amelin, A. I. Baranova, and N. M. Antonova</b>	
Applicant	<b>Samoilov Scientific Research Institute of Fertilizers and Insecticides-Fungicides</b>	

### **METHOD FOR PRODUCTION OF CONCENTRATED SULFUR TRIOXIDE**

The invention pertains to a method for the production of concentrated sulfur trioxide from gas mixtures, which is used for the sulfation of different compounds.

A method is known for producing concentrated sulfur trioxide from gas mixtures, with the subsequent formation of oil by adsorption of sulfur trioxide in sulfuric acid bubbling apparatuses.

The proposed method differs from the known one in that the gas mixture is sorbed with silica gel at  $t = 50-120^{\circ}\text{C}$  with subsequent desorption at  $t = 150-300^{\circ}\text{C}$ .

This difference promotes the production of a dry, solid product suitable for transport.

Example. 1000  $\text{m}^3$  of a gas mixture containing 7%  $\text{SO}_3$  at a temperature of  $120^{\circ}\text{C}$  is sent to an apparatus with sieve plates, in which silica gel is moved from plate to plate through overflow tubes in opposition to the gas. The  $\text{SO}_3$  is sorbed by the silica gel and remains dry. At the output from the apparatus, 500 kg of product is obtained, containing  $\text{SO}_3$  in an amount of 100% by weight of the silica gel. At the usage location, the obtained product is heated to  $t = 300^{\circ}\text{C}$  to produce concentrated  $\text{SO}_3$ .

## CLAIM

Method for the production of concentrated sulfur trioxide from gas mixtures, characterized by the fact that, in order to obtain a dry, solid product that is convenient for transport, the gas mixture is sorbed with silica gel at  $t = 50-120^{\circ}\text{C}$  and subsequent desorption at  $t = 150-300^{\circ}\text{C}$ .